NAME

rad2mgf - convert RADIANCE scene description to Materials and Geometry Format

SYNOPSIS

rad2mgf [**−dU**] [**input ..**]

DESCRIPTION

Rad2mgf converts one or more RADIANCE scene files to the Materials and Geometry Format (MGF). Input units are specified with the *−mU* option, where *U* is one of 'm' (meters), 'c' (centimeters), 'f' (feet) or 'i' (inches). The assumed unit is meters, which is the required output unit for MGF (thus the need to know). If the input dimensions are in none of these units, then the user should apply *xform(1)* with the *−s* option to bring the units into line prior to translation.

The MGF material names and properties for the surfaces will be those assigned in RADIANCE. If a referenced material has not been defined, then its name will be invoked in the MGF output without definition, and the description will be incomplete.

LIMITATIONS

Although MGF supports all of the geometric types and the most common material types used in RADIANCE, there is currently no support for advanced BRDF materials, patterns, textures or mixtures. Also, the special types "source" and "antimatter" are not supported, and all light source materials are converted to simple diffuse emitters (except "illum" materials, which are converted to their alternates). These primitives are reproduced as comments in the output and must be replaced manually if necessary.

The RADIANCE "instance" and "mesh" types aretreated specially. *Rad2mgf* converts each instance or mesh to an MGF include statement, using the corresponding transformation and a file name derived from the octree or mesh name. (The original octree/mesh suffix is replaced by ".mgf".) For this to work, the user must separately create the referenced MGF files from the original RADIANCE descriptions. The description file names can usually be determined using the *getinfo(1)* command run on the octrees in question.

EXAMPLE

To convert three RADIANCE files (in feet) to one MGF file:

```
rad2mgf −df file1.rad file2.rad file3.rad > scene.mgf
```

To translate a RADIANCE materials file to MGF:

```
rad2mgf materials.rad > materials.mgf
```

AUTHOR

Greg Ward

SEE ALSO

getinfo(1), ies2rad(1), mgf2meta(1), mgf2rad(1), obj2rad(1), oconv(1), xform(1)

MGF web site "http://radsite.lbl.gov/mgf/HOME.html"